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 WISEN (TM)  
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Msrch\_pp protein - protein database search, using Smith-Waterman algorithm  
 Run on: Sat May 13 09:11:10 2000; Maspar time 3.26 Seconds  
 Tabular output not generated. 167.001 Million cell updates/sec

Title: >US-09-331-631-26  
 Description: (1-23) from US09331631.pep  
 Perfect Score: 183  
 Sequence: 1 VKEDHOFETRGEILCEYRLCQQQ 23

Scoring table: PAM 150  
 Gap 15

Searched: 188963 seqs, 23686106 residues

Post-processing: Minimum Match 0%  
 Listing first 45 summaries

Database: a-geneseq35  
 1:geneseqp

Statistics: Mean 21.302; Variance 67.176; scale 0.317

Pred. No. is the number of results predicted by chance to have a  
 score greater than or equal to the score of the result being printed,  
 and is derived by analysis of the total score distribution.

## SUMMARIES

| Result No. | Score | Query Match | Length | DB ID    | Description            | Pred. No. |
|------------|-------|-------------|--------|----------|------------------------|-----------|
| 1          | 183   | 100.0       | 23     | 1 W62839 | Stenocarpus sinuatus a | 4.06e-13  |
| 2          | 74    | 40.4        | 17     | 1 W62840 | Protein sequence that  | 5.52e+00  |
| 3          | 71    | 38.8        | 143    | 1 W42635 | Hexosaminidase enzyme  | 1.43e+01  |
| 4          | 67    | 36.6        | 611    | 1 W02157 | G-protein coupled huma | 2.89e+01  |
| 5          | 67    | 36.6        | 611    | 1 W85599 | Human dopamine D1 rece | 2.89e+01  |
| 6          | 64    | 35.0        | 373    | 1 R48703 | Rat dopamine D1 recept | 2.89e+01  |
| 7          | 64    | 35.0        | 373    | 1 W02675 | Human dopamine D1 rece | 2.89e+01  |
| 8          | 64    | 35.0        | 446    | 1 R15498 | Human dopamine D1 rece | 2.89e+01  |
| 9          | 64    | 35.0        | 446    | 1 R38364 | Human dopamine D1 rece | 2.89e+01  |
| 10         | 64    | 35.0        | 446    | 1 R15499 | Human dopamine D1 rece | 2.89e+01  |
| 11         | 64    | 35.0        | 487    | 1 W09795 | Human dopamine D1 rece | 2.89e+01  |
| 12         | 64    | 35.0        | 487    | 1 R13596 | Human dopamine D1 rece | 2.89e+01  |
| 13         | 64    | 35.0        | 529    | 1 W19001 | Human dopamine D1 rece | 2.89e+01  |
| 14         | 64    | 35.0        | 529    | 1 W98108 | Human dopamine D1 rece | 2.89e+01  |
| 15         | 64    | 35.0        | 529    | 1 W98108 | Human dopamine D1 rece | 2.89e+01  |
| 16         | 64    | 35.0        | 529    | 1 W98108 | Human dopamine D1 rece | 2.89e+01  |
| 17         | 64    | 35.0        | 529    | 1 W98108 | Human dopamine D1 rece | 2.89e+01  |
| 18         | 64    | 35.0        | 529    | 1 W98108 | Human dopamine D1 rece | 2.89e+01  |
| 19         | 64    | 35.0        | 529    | 1 W98108 | Human dopamine D1 rece | 2.89e+01  |
| 20         | 64    | 35.0        | 529    | 1 W98108 | Human dopamine D1 rece | 2.89e+01  |
| 21         | 64    | 35.0        | 529    | 1 W98108 | Human dopamine D1 rece | 2.89e+01  |
| 22         | 64    | 35.0        | 529    | 1 W98108 | Human dopamine D1 rece | 2.89e+01  |
| 23         | 64    | 35.0        | 529    | 1 W98108 | Human dopamine D1 rece | 2.89e+01  |

|    |    |      |      |          |                        |          |
|----|----|------|------|----------|------------------------|----------|
| 24 | 61 | 33.3 | 1863 | 1 R81488 | BRCA1 mutant from pati | 5.77e+01 |
| 25 | 61 | 33.3 | 1863 | 1 W79889 | Tumorigenic BRCA1 pro  | 5.77e+01 |
| 26 | 61 | 33.3 | 1863 | 1 R81529 | BRCA1 mutant from samp | 5.77e+01 |
| 27 | 61 | 33.3 | 1863 | 1 R81546 | BRCA1 mutant from PM27 | 5.77e+01 |
| 28 | 61 | 33.3 | 1863 | 1 R81505 | BRCA1 mutant from samp | 5.77e+01 |
| 29 | 61 | 33.3 | 1863 | 1 W26522 | Human BRCA1 consensus  | 5.77e+01 |
| 30 | 61 | 33.3 | 1863 | 1 R81522 | BRCA1 mutant from samp | 5.77e+01 |
| 31 | 61 | 33.3 | 1863 | 1 R81533 | BRCA1 mutant from PM01 | 5.77e+01 |
| 32 | 61 | 33.3 | 1863 | 1 W76100 | Human BRCA1 om13 prote | 5.77e+01 |
| 33 | 61 | 33.3 | 1863 | 1 R99440 | BRCA1 allele #8403 tra | 5.77e+01 |
| 34 | 61 | 33.3 | 1863 | 1 R81532 | BRCA1 mutant from samp | 5.77e+01 |
| 35 | 61 | 33.3 | 1863 | 1 R81493 | BRCA1 mutant from pati | 5.77e+01 |
| 36 | 61 | 33.3 | 1863 | 1 R81542 | BRCA1 mutant from PM23 | 5.77e+01 |
| 37 | 61 | 33.3 | 1863 | 1 R97128 | BRCA1, breast and ovar | 5.77e+01 |
| 38 | 61 | 33.3 | 1863 | 1 R81486 | BRCA1 mutant from pati | 5.77e+01 |
| 39 | 61 | 33.3 | 1863 | 1 R81519 | BRCA1 mutant from samp | 5.77e+01 |
| 40 | 61 | 33.3 | 1863 | 1 R81534 | BRCA1 mutant from PM03 | 5.77e+01 |
| 41 | 61 | 33.3 | 1863 | 1 R81545 | BRCA1 mutant from PM26 | 5.77e+01 |
| 42 | 61 | 33.3 | 1863 | 1 R91208 | BRCA1, breast and ovar | 5.77e+01 |
| 43 | 61 | 33.3 | 1863 | 1 R81544 | BRCA1 mutant from PM25 | 5.77e+01 |
| 44 | 61 | 33.3 | 1863 | 1 R81537 | BRCA1 mutant from PM12 | 5.77e+01 |
| 45 | 61 | 33.3 | 1863 | 1 R81511 | BRCA1 mutant from samp | 5.77e+01 |

## ALIGNMENTS

RESULT 1  
 ID W62839 standard; Protein; 23 AA.  
 AC W62839.  
 DE 27-OCT-1998 (first entry)  
 DT Stenocarpus sinuatus antimicrobial protein.  
 KW antimicrobial protein; infestation; control.  
 OS Stenocarpus sinuatus.  
 PN W09827805-A1.  
 PD 02-JUL-1998.  
 PF 22-DEC-1997; AU0874.  
 PR 20-DEC-1996; AU-004275.  
 PA (RETR-) COOP RES CENT TROPICAL PLANT PATHOLOGY.  
 PI Bower NI, Goulter KC, Green JL, Manners JM, Marcus JP;  
 DR WPT, 98-377279/32.  
 FT Novel anti-microbial protein from e.g. Macadamia integrifolia -  
 PT useful for controlling microbial infestations of plants or mammals  
 PS Claim 1; Page 65; 96pp; English.  
 CC The sequence is that of an antimicrobial protein which can  
 CC be used to control microbial infestations in plants and mammalian  
 CC animals.  
 CC Sequence 23 AA:  
 SQ  
 Query Match 100.0%; Score 183; DB 1; Length 23;  
 Best Local Similarity 100.0%; Pred. No. 4.06e-13;  
 Matches 23; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
 Db 1 VKEDHOFETRGEILCEYRLCQQQ 23  
 QY 1 VKEDHOFETRGEILCEYRLCQQQ 23  
 RESULT 2  
 ID W62840 standard; Protein; 17 AA.  
 AC W62840.  
 DE 27-OCT-1998 (first entry)  
 DT Stenocarpus sinuatus antimicrobial protein.  
 KW antimicrobial protein; infestation; control.  
 OS Stenocarpus sinuatus.  
 FH Key Location/Qualifiers  
 FT Misc\_difference 13  
 FT /note="undefined amino acid"  
 PN W09827805-A1.  
 PD 02-JUL-1998.  
 PF 22-DEC-1997; AU0874.  
 PR 20-DEC-1996; AU-004275.  
 PA (RETR-) COOP RES CENT TROPICAL PLANT PATHOLOGY.  
 PI Bower NI, Goulter KC, Green JL, Manners JM, Marcus JP;

## RESULT 4

Query Match 36.68: Score 67: DB 1: Length 611:



| Accession             | Location/Qualifiers   | Score | DB | Length | Pred. No. | Mismatches | Indels | Gaps |
|-----------------------|---|-------|----|--------|-----------|------------|--------|------|
| FW                    | catecholamine: G-protein-coupled receptor; neurotransmitter;          |       |    |        |           |            |        |      |
| KW                    | adenylyl cyclase stimulation.   |       |    |        |           |            |        |      |
| OS                    | Rattus rattus.  |       |    |        |           |            |        |      |
| FT                    | Key   |       |    |        |           |            |        |      |
| FT                    | modified_site   | 4     |    |        |           |            |        |      |
| FT                    | /label= OTHER   |       |    |        |           |            |        |      |
| FT                    | /note= "N-glycosylation site - putative"                              |       |    |        |           |            |        |      |
| FT                    | 174   |       |    |        |           |            |        |      |
| FT                    | /label= OTHER   |       |    |        |           |            |        |      |
| FT                    | /note= "N-glycosylation site - putative"                              |       |    |        |           |            |        |      |
| FT                    | 135   |       |    |        |           |            |        |      |
| FT                    | /label= Protein_kinase_A-phosphorylation_site                         |       |    |        |           |            |        |      |
| FT                    | /note= "putative"   |       |    |        |           |            |        |      |
| FT                    | 229   |       |    |        |           |            |        |      |
| FT                    | /label= Protein_kinase_A-phosphorylation_site                         |       |    |        |           |            |        |      |
| FT                    | /note= "putative"   |       |    |        |           |            |        |      |
| FT                    | 268   |       |    |        |           |            |        |      |
| FT                    | /label= Protein_kinase_A-phosphorylation_site                         |       |    |        |           |            |        |      |
| FT                    | /note= "putative"   |       |    |        |           |            |        |      |
| FT                    |   |       |    |        |           |            |        |      |
| FT                    | modified_site   |       |    |        |           |            |        |      |
| FT                    |   |       |    |        |           |            |        |      |
| PN                    | W0918005-A.   |       |    |        |           |            |        |      |
| PD                    | 28-NOV-1991.  |       |    |        |           |            |        |      |
| PF                    | 13-MAY-1991: U03308.  |       |    |        |           |            |        |      |
| PR                    | 14-MAY-1990: US-523237.   |       |    |        |           |            |        |      |
| PR                    | 17-SEP-1990: US-583852.   |       |    |        |           |            |        |      |
| PA                    | (UYDU-) DUKE UNIV.  |       |    |        |           |            |        |      |
| PA                    | (UYOR-) OREGON HEALTH SCI UNIV.                                       |       |    |        |           |            |        |      |
| P1                    | Bunzow JR, Civeilli O, Grandy DK, Zhou OY, Caron MG;                  |       |    |        |           |            |        |      |
| P1                    | Deary A, Falardeau P, Gingrich JA;                                    |       |    |        |           |            |        |      |
| DR                    | WPI: 91-369177/50.  |       |    |        |           |            |        |      |
| DR                    | N-PSDB: 014955.   |       |    |        |           |            |        |      |
| PT                    | Cloned gene encoding D1-dopamine receptor - useful for e.g. drug      |       |    |        |           |            |        |      |
| PT                    | screening; diagnosis of e.g. Parkinson's disease or schizophrenia     |       |    |        |           |            |        |      |
| PT                    | or in gene therapy  |       |    |        |           |            |        |      |
| PS                    | Example 9; Fig 3A; 52pp; English.                                     |       |    |        |           |            |        |      |
| CC                    | The D1 dopamine receptor sequence was obtained from two overlapping   |       |    |        |           |            |        |      |
| CC                    | clones, one genomic and the other from a rat striatum cDNA            |       |    |        |           |            |        |      |
| CC                    | library. The amino acid sequence was deduced from the                 |       |    |        |           |            |        |      |
| CC                    | nucleotide coding sequence. The receptor is similar to the human D1   |       |    |        |           |            |        |      |
| CC                    | dopamine receptor (see R15498) and known G-protein coupled proteins,  |       |    |        |           |            |        |      |
| CC                    | e.g. Cys(351) in the carboxyl terminus is conserved in most G-protein |       |    |        |           |            |        |      |
| CC                    | -coupled receptors; it may be palmitoylated. The carboxyl tail also   |       |    |        |           |            |        |      |
| CC                    | contains several putative sites for phosphorylation by an agonist-    |       |    |        |           |            |        |      |
| CC                    | dependent receptor kinase.  |       |    |        |           |            |        |      |
| SO                    | Sequence 446 AA;  |       |    |        |           |            |        |      |
| Query Match           | 35.0%; Score 64; DB 1; Length 446;                                    |       |    |        |           |            |        |      |
| Best Local Similarity | 75.0%; Pred. No. 2.89e+01;  |       |    |        |           |            |        |      |
| Matches               | 6; Conservative 1; Mismatches 1; Indels 0; Gaps 0                     |       |    |        |           |            |        |      |
| Db                    | 344 LLGCYRLC 351  |       |    |        |           |            |        |      |
|                       | :   |       |    |        |           |            |        |      |
| OY                    | 13 ILGCYRLC 20  |       |    |        |           |            |        |      |
| RESULT                | 11  |       |    |        |           |            |        |      |
| ID                    | W09795 standard; Protein: 487 AA.                                     |       |    |        |           |            |        |      |
| AC                    | W09795;   |       |    |        |           |            |        |      |
| DT                    | 11-JUN-1997 (first entry)   |       |    |        |           |            |        |      |

PI Mahan LC; Mcvittie LD, Monsma FJ, Sibley DR;  
 DR WPI: 97-178452/16.  
 DR N-PSDB: T63657.  
 PT DNA encoding D1 dopamine receptor protein - for production of  
 PT transformed cells used for drug screening  
 PS Claim 1; Column 11-16; 24pp; English.  
 CC The sequence is the rat D1 dopamine receptor protein which is linked to  
 CC the activation of adenylyl cyclase activity. The receptor also couples  
 CC with guanine nucleotide binding regulatory (G) proteins. By constructing  
 CC cell lines that express the D1 receptor, the affinities and efficacies of  
 CC agonist and antagonist drugs can be assessed.  
 SQ Sequence 487 AA;  
 Query Match 35.0%; Score 64; DB 1; Length 487;  
 Best Local Similarity 75.0%; Pred. No. 2.89e+01;  
 Matches 6; Conservative 1; Mismatches 1; Indels 0; Gaps 0;  
 Db 385 LIGCYRLC 392  
 QY 13 ILCEYRLC 20  
 RESULT 12  
 ID R13596 standard; Protein; 487 AA.  
 AC R13596;  
 DT 01-NOV-1991 (first entry)  
 DE D1 dopamine receptor.  
 KW Adenylyl cyclase; G protein; neurotransmitter; hormone; signal;  
 KM transduction.  
 OS Rattus rattus.  
 PN US7548714-A.  
 PD 23-JUL-1991.  
 PF 06-JUL-1990; 154559.  
 PR 06-JUL-1990; US-548714.  
 PA (USSH ) NAT INSTR OF HEALTH.  
 PI Sibley D, Monsma F, Mahan L, Mcvittie L;  
 DR WPI: 91-260183/35.  
 DR N-PSDB: Q13337.  
 PT DNA encoding D1, dopamine receptor - used to investigate  
 PT affinities and efficacy of agonist and antagonist drugs with the  
 PT D1 receptor.  
 PS Disclosure; Fig 1a; 38pp; English.  
 CC The sequence was deduced from a clone isolated from a rat striatal  
 CC cDNA library. The gene can be ligated into expression vectors  
 CC for prodn. of the D1 dopamine receptor. Hydrophobicity analysis  
 CC revealed seven transmembrane spanning domains. The NH2 terminus  
 CC contains one N-glycosylation site and the third cytoplasmic loop  
 CC exhibits one recognition site for phosphorylation by the cAMP-  
 CC dependent protein kinase. The long COOH terminus contains several  
 CC serine and threonine residues possibly representing additional  
 CC sites for regulatory phosphorylation. The receptor couples with  
 CC guanine binding regulatory protein (G protein) and is linked to  
 CC the stimulation of adenylyl cyclase. D1 receptor expressing cell  
 CC lines can be used to investigate the affinities and efficacies of  
 CC agonist and antagonist drugs. For diagnostic purposes, expression  
 CC of the receptor can be measured using e.g. antibodies to the  
 CC receptor.  
 SQ Sequence 487 AA;  
 Query Match 35.0%; Score 64; DB 1; Length 487;  
 Best Local Similarity 75.0%; Pred. No. 2.89e+01;  
 Matches 6; Conservative 1; Mismatches 1; Indels 0; Gaps 0;  
 Db 385 LIGCYRLC 392  
 QY 13 ILCEYRLC 20  
 RESULT 13  
 ID W19001 standard; Protein; 529 AA.  
 AC W19001;  
 DT 05-MAY-1998 (first entry)  
 DE Feline herpes virus type 1 truncated ORF1-encoded protein.

KW Feline herpes virus type 1; open reading frame; ORF1 vector; vaccine;  
 KW feline infectious peritonitis virus; FIPV; cat; immunisation;  
 KM rhinotracheitis.  
 OS Feline herpesvirus.  
 PN MO9720059-A1.  
 PD 05-JUN-1997.  
 PE 19-NOV-1996; F01830.  
 PR 30-NOV-1995; FR-014450.  
 PA (INMR ) RHONE MERIEUX SA.  
 PI Audonnet JCF, Baudu PCN, Riviere MAE;  
 DR WPI: 97-310613/28.  
 DR N-PSDB: T69857.  
 PT Live recombinant vaccine based on feline herpes virus - has  
 PT antigen-encoding sequence inserted in open reading frame 2 or 5,  
 PT particularly for protection against feline infectious peritonitis  
 PT virus  
 PS Claim 18; Fig 1; 60pp; French.  
 CC This sequence represent part of protein encoded by ORF1 from the feline  
 CC herpes virus type 1 (FHV-1) from strain CO. The nucleotide sequence  
 CC is used as a vector to generate a live recombinant vaccine, in which a  
 CC polypeptide coding sequence (especially a gene taken from the feline  
 CC infectious peritonitis virus (FIPV)) is inserted into open reading  
 CC frames 5 and/or 2. Vaccines comprising the vector are used to protect  
 CC cats, specifically against FIPV. The vaccine is attenuated but retains  
 CC a good capacity to replicate in vivo and still protects against  
 CC infectious rhinotracheitis (caused by FHV).  
 SQ Sequence 529 AA;  
 Query Match 35.0%; Score 64; DB 1; Length 529;  
 Best Local Similarity 41.2%; Pred. No. 2.89e+01;  
 Matches 7; Conservative 4; Mismatches 6; Indels 0; Gaps 0;  
 Db 165 HFDRGDALFTSNCTE 181  
 QY 6 QFERGRIILECYRLCQ 22  
 RESULT 14  
 ID W98108 standard; Protein; 768 AA.  
 AC W98108;  
 DT 21-JUN-1999 (first entry)  
 DE Caenorhabditis elegans elongation factor-2 kinase (eEF-2 kinase).  
 KW Elongation factor-2 kinase; eEF-2 kinase; nematode; protein kinase;  
 KM inhibitor; breast cancer; therapy.  
 OS Caenorhabditis elegans.  
 FH Key location/Qualifiers  
 FT Region 66..79 "predicted amphipathic alpha-helix  
 FT structure"  
 FT MO9909199-A2.  
 PD 25-FEB-1999.  
 PR 20-AUG-1998; U17272.  
 PR 20-AUG-1997; US-914999.  
 PA (UYNE-) UNIV NEW JERSEY.  
 PI Hait WN, Pavur KS, Ryzanov AG;  
 DR WPI: 99-181050/15.  
 DR N-PSDB: X24907.  
 PT New isolated protein kinase, eEF-2 - used to develop agents for  
 PT controlling the amount, or activity of protein kinases, e.g. for  
 PT treating cancers or other hyperproliferative pathologies  
 PS Claim 6; Page 128-130; 195pp; English.  
 CC This protein is Caenorhabditis elegans elongation factor-2 kinase  
 CC (eEF-2 kinase), a member of a new superfamily of eukaryotic protein  
 CC kinases that phosphorylate within an alpha-helical domain of a  
 CC target protein, as opposed to beta-turns as seen in all other  
 CC protein kinases. eEF-2 kinase is a ubiquitous enzyme involved in  
 CC the regulation of protein synthesis and the cell cycle. It has no  
 CC homology to any other mammalian protein kinase, and is therefore an  
 CC ideal target in the search for a specific protein kinase inhibitor.  
 CC Since preliminary evidence suggests that human eEF-2 kinase (see  
 CC W98106) is upregulated in human cancers, including breast cancer,  
 CC identification of specific inhibitors of eEF-2 kinase may lead to  
 CC the development of novel anticancer drugs. Assays have been

